

AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions of claims in the application:

1. (Currently Amended) A method for ~~auto-configuring~~ a customer premises equipment (CPE) device to auto-configure itself, over said CPE device being coupled to an Asynchronous Transfer Mode (ATM) network, said ATM network having a preexisting Permanent Virtual Circuit (PVC) to which said CPE device is to be self auto-configured, said method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking said plurality of ATM cells for an Operation and Maintenance (OAM) cell, said OAM cell allowing the PVC to be directly auto-configured by ~~obtaining~~ having the CPE device by itself obtain a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI) from said OAM cell;

~~configuring the PVC by obtaining said VPI and said VCI from a first ATM cell; and~~

~~linking the PVC to a protocol, said protocol being applicable to DSL~~

replying to said OAM cell in a suitable manner.

2. (Canceled)

3. (Original) A method in accordance with claim 1, wherein said OAM cell is used for exchanging control and maintaining the ATM network running.

4-7. (Canceled)

8. (Currently Amended) An Asynchronous Transfer Mode (ATM) communications system comprising:

a digital subscriber line access module receiving ~~said plurality~~ a plurality of ATM cells;
and

a customer premises equipment device having a mechanism which directly auto-configures to a preexisting Permanent Virtual Circuit (PVC), said mechanism receiving an ATM cell, said mechanism checking said ATM cell for an Operation and Maintenance (OAM) cell, said OAM cell allowing self configuring said PVC by reading a Virtual Path Identifier (VPI) and a Virtual Channel Identifier (VCI) from said OAM, and said mechanism ~~linking said PVC to a Point-to-Point Protocol interface or an RFC 1483 bridge interface~~ replying to said OAM cell in a suitable manner.

9. (Canceled)

10. (Original) An Asynchronous Transfer Mode communications system in accordance with claim 8, wherein said OAM cell is used for exchanging control and maintaining said ATM communication system.

11 and 12. (Canceled)

13. (Currently Amended) A customer premises equipment device coupled to an Asynchronous Transfer Mode (ATM) network, said device being capable of directly auto-configuring itself ~~over said ATM network~~, said ATM network having a preexisting Permanent Virtual Circuit (PVC) to which said device is to be self auto-configured, said device comprising:
means for receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

means for checking said plurality of ATM cells for an ~~OAM~~ Operation and Maintenance (OAM) cell, said OAM cell allowing ~~configuring~~ said device to directly self auto-configure said PVC by reading a ~~VPI~~ Virtual Path Identifier (VPI) and a ~~VCI~~ Virtual Circuit Identifier (VCI) from said OAM cell;

~~means for configuring said PVC by reading said VPI and said VCI from a first ATM cell;~~
and

~~means for linking the PVC to a protocol, said protocol being applicable to DSL~~

means for replying to said OAM cell in a suitable manner.

14. (Canceled)

15. (Currently Amended) A program storage device readable by a machine, embodying a program of instructions, executable by the machine to perform a method for ~~auto-configuring~~ a customer premises equipment (CPE) device to auto-configure itself, over said CPE device being coupled to an Asynchronous Transfer Mode (ATM) network, said ATM network having a preexisting Permanent Virtual Circuit (PVC) to which said CPE device is to be self auto-configured, said method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking said plurality of ATM cells for an Operation and Maintenance (OAM) cell, said OAM cell allowing the PVC to ~~auto-configure~~ be directly auto-configured by ~~obtaining~~ having the CPE device by itself obtain a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI) from said OAM cell;

~~configuring the PVC by obtaining said VPI and said VCI from a first ATM cell; and~~

~~linking the PVC to a protocol, said protocol being applicable to DSL~~

replying to said OAM cell in a suitable manner.

16. (Original) A program storage device in accordance with claim 15, wherein said OAM cell is used for exchanging control and maintaining the ATM network running.

17-20. (Canceled)

21. (New) A method for a customer premises equipment (CPE) device to auto-configure itself, the CPE device being coupled to an Asynchronous Transfer Mode (ATM) network, the ATM network having a preexisting Permanent Virtual Circuit (PVC) to which the CPE device is to be self auto-configured, the method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking the plurality of ATM cells to identify a first ATM cell of a packet, the first ATM cell including a header and a payload, the header including a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI);

configuring directly the PVC of the CPE device by having the CPE device by itself obtain the VPI and the VCI from the first ATM cell; and

linking the PVC to a protocol, the protocol being applicable to a Digital Subscriber Line.

22. (New) The method in accordance with claim 21, wherein the first ATM cell is identified by measuring an elapsed time of at least 800 milliseconds between a previous ATM cell and the first ATM cell.

23. (New) The method in accordance with claim 21, wherein the protocol further includes a Point-to-Point Protocol interface or a Request-For-Comments 1483 bridge interface.

24. (New) The method in accordance with claim 21, further comprising receiving a plurality of messages from an aggregate router, the plurality of messages being a plurality of Link Control Protocol configuration requests or a plurality of Bridge Protocol Data Unit spanning tree messages.

25. (New) The method in accordance with claim 21, wherein the linking further includes configuring a Dynamic Host Configuration Protocol or an IPCP configuration once the configured PVC is linked to a PPP module or a bridging module.

26. (New) A customer premises equipment device coupled to an Asynchronous Transfer Mode (ATM) network, the device being capable of auto-configuring itself over the ATM network, the ATM network having a preexisting Permanent Virtual Circuit (PVC) to which the device is to be auto-configured, the device comprising:

means for receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

means for checking the plurality of ATM cells to identify a first ATM cell of a packet, the first ATM cell including a header and a payload, the header including a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI);

means for configuring directly the PVC of the CPE device by having the CPE device by itself obtain the VPI and the VCI from the first ATM cell; and

means for linking the PVC to a protocol, the protocol being applicable to a Digital Subscriber Line.

27. (New) The device in accordance with claim 26, wherein the first ATM cell is determined by measuring an elapsed time of at least 800 milliseconds between a previous ATM cell and the first ATM cell.

28. (New) A program storage device readable by a machine, embodying a program of instructions, executable by the machine to perform a method for a customer premises equipment (CPE) device to auto-configure itself, the CPE device being coupled to an Asynchronous Transfer Mode (ATM) network, the ATM network having a preexisting Permanent Virtual Circuit (PVC) to which the CPE device is to be self auto-configured, the method comprising:

receiving a plurality of ATM cells from a digital subscriber line access multiplexer;

checking the plurality of ATM cells to identify a first ATM cell of a packet, the first ATM cell including a header and a payload, the header including a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI);

configuring directly the PVC of the CPE device by having the CPE device by itself obtain the VPI and the VCI from the first ATM cell; and

linking the PVC to a protocol, the protocol being applicable to a Digital Subscriber Line.

29. (New) The program storage device in accordance with claim 28, wherein the first ATM cell is determined by measuring an elapsed time of at least 800 milliseconds between a previous ATM cell and the first ATM cell.

30. (New) The program storage device in accordance with claim 28, wherein the protocol further includes a Point-to-Point Protocol interface or a Request-For-Comments 1483 bridge interface.

31. (New) The program storage device in accordance with claim 28, further comprising receiving a plurality of messages from an aggregate router, the plurality of messages being a plurality of Link Control Protocol configuration requests or a plurality of Bridge Protocol Data Unit spanning tree messages.

32. (New) The program storage device in accordance with claim 28, wherein the linking further includes configuring a Dynamic Host Configuration Protocol or an IPCP configuration once the configured PVC is linked to a PPP module or a bridging module.

33. (New) An Asynchronous Transfer Mode (ATM) communications system comprising:

a digital subscriber line access module receiving a plurality of ATM cells; and
a customer premises equipment device having a mechanism which directly auto-configures to a preexisting Permanent Virtual Circuit (PVC), the mechanism receiving a plurality of ATM cells, the mechanism checking the plurality of ATM cells to identify a first ATM cell of a packet, the first ATM cell including a header and a payload, the header including a Virtual Path Identifier (VPI) and a Virtual Circuit Identifier (VCI), the mechanism configuring directly the PVC by obtaining by itself the VPI and the VCI from the first ATM cell, and the mechanism linking the PVC to a protocol, the protocol being applicable to a Digital Subscriber Line.

34. (New) The system in accordance with claim 33, wherein the first ATM cell is determined by measuring an elapsed time of at least 800 milliseconds between a previous ATM cell and the first ATM cell.

35. (New) The system in accordance with claim 33, wherein the customer premises equipment device further receives a plurality of messages from an aggregate router, the plurality of messages being a plurality of Link Control Protocol configuration requests or a plurality of Bridge Protocol Data Unit spanning tree messages.